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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                 | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------------|------------------|
| 09/043,406   | 03/18/1998  | PAUL D O'BRIEN       | 36-1148                             | 6681             |
| 23117  | 7590        | 05/19/2006           |                                     |                  |
| NIXON & VANDERHYE, PC<br>901 NORTH GLEBE ROAD, 11TH FLOOR<br>ARLINGTON, VA 22203 |             |                      | EXAMINER<br>ROBINSON BOYCE, AKIBA K |                  |
|  |             |                      | ART UNIT<br>3639                    | PAPER NUMBER     |

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/043,406

Applicant(s)

O'BRIEN ET AL.

Examiner

Akiba K. Robinson-Boyce

Art Unit

3639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 53-58 and 61-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 53-58 and 61-76 is/are rejected.
- 7) ☒ Claim(s) 75 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Claims***

1. Due to communications filed 3/7/06, the following is a non-final office action. Prosecution for this application has been re-opened. Claims 53-58 and 61-76 are pending in this application. The previous rejection has been withdrawn, and claims 53-58 and 61-76 are rejected as follows.

### ***Claim Objections***

2. Claim 75 is objected to because of the following informalities: It is an apparatus claim that depends from a method claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 68 and 76 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "first autonomous software process" and "second autonomous software process" in claims 68 and 76 are relative terms that render the claims indefinite. The terms "first autonomous software process" and "second autonomous software process" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

not be reasonably apprised of the scope of the invention. Because the terms "first autonomous software process" and "second autonomous software process" are used, both claims 68 and 76, are unclear, thereby making the scope of the invention unclear as well.

Claim 68 recites the limitation "said service" in lines 6 and 11. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 53-58 and 61-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr et al (US 5,608,446).

As per claims 53, Carr et al discloses:

an input for receiving a service request, (Col. 5, lines 19-25, keyboard/monitor, and input/output interface, w/ col. 20, lines 14-21, shows user input for a request to switch to a high speed link);

Processing means for processing the service request, (Col. Col. 9, lines 61-64, service provider uses system to initiate a request);

negotiation means for use in establishing conditions applicable to provision of one or more component processes involved in provision of the service, said negotiation means being adapted to assemble said conditions in the data store proactively by negotiation prior to receipt of said service request, (Col. 9, line 67-Col. 10, line 15, providing negotiations in order to allocated bandwidth without causing overload conditions);

an up-datable data store/means to access said up-datable data store for storing said conditions when established and assembled, (Col. 9, lines 45-49, shows a database that works in conjunction with the negotiation means);

an output for providing a response to the service request, said response comprising a n indication of availability of the requested service, (Col. 15, lines 19-25, input/output interface, w/ col. 10, lines 21-26, control processor mediates requests, w/ col. 25, line 5-Col. 26, line 4, output transferred or source to destination);

where the processing means is adapted to process a service request by accessing one or more of the previously established conditions in the data store, processing the request using the one or more established conditions and producing said response, (Col. 9, lines 60-67, assigning a specified bandwidth to accommodate data to be transmitted from the service provider to the user).

As per claims 54/55, Carr et al discloses:

Wherein one or more of said established conditions has an associated expiry time after which it is no longer applicable/Wherein the processing means is adapted to detect an expired or undefined condition in the data store, which condition is applicable to a component process for the provision of a requested service, and to trigger the

negotiation means to establish a substitute condition, (Col. 9, lines 53-62, after expiration).

As per claim 56, Carr et al discloses:

means to access said data store for storing data related to services offered by the system and to one or more entities which have an interest in receiving information relating to one or more of said services, together with means to transmit information based on said data related to services to the one or more entities which have an interest, (Col. 9, lines 45-49, shows a database that works in conjunction with the negotiation means).

As per claim 57, Carr et al discloses:

which further comprises initiation means to initiate one or more component processes in provision of a requested service, (Col. Col. 9, lines 61-64, service provider uses system to initiate a request);

As per claim 58, Carr et al discloses:

provisioning a requested service requires provision of a selected set of component processes, (Col. 5, lines 19-25, keyboard/monitor, and input/output interface, w/ col. 20, lines 14-21, shows user input);

the negotiation means establishes and stores a set of conditions applicable to provision of the component processes of the selected set, (Col. 9, line 67-Col. 10, line 15, providing negotiations in order to allocate bandwidth without causing overload conditions);

the processing means is adapted to process a service request by accessing the stored set of conditions in the data store, processing the request using said stored set,

and producing said response, (Col. 9, lines 60-67, assigning a specified bandwidth to accommodate data to be transmitted from the service provider to the user).

As per 61, Carr et al discloses:

Establishing conditions applicable to provision of one or more component processes in a service, proactively by negotiation prior to receipt of said service request, (Col. 9, line 67-Col. 10, line 15, providing negotiations in order to allocated bandwidth without causing overload conditions, in this case, the negotiations establishes conditions without going into overload);

Accessing an up-datable data store and storing said conditions once established, (Col. 9, lines 45-49, shows a database that works in conjunction with the negotiation means);

subsequently receiving a request for said service, (col. 20, lines 14-21, shows user input for a request to switch to a high speed link)

Processing said service request by:

a)accessing one or more of said previously established conditions in the data store, (Col. 9, lines 45-49, shows a database that works in conjunction with the negotiation means); and

b)providing a response to the service request, said response comprising an indication of availability of the requested service dependent upon whether said one or more established conditions is met, (Col. 9, lines 60-67, assigning a specified bandwidth to accommodate data to be transmitted from the service provider to the user).

As per claim 62, Carr et al discloses :

wherein one or more of said established conditions stored in said data store is applicable until advent of an expiry time associated with said one or more conditions, (Col. 9, lines 53-62, after expiration).

As per claim 63, Carr et al discloses :

wherein further comprising the step, responsive to receipt of said request, of finding whether any conditions for provision of said service are extant and substituting a substitute condition in the event that no such conditions are found, (Col. 9, lines 53-56, w. col. 10, lines 1-15, update of channel availability to prevent overload conditions).

As per claim 64, Carr et al discloses :

wherein said method further comprises the step of scheduling provision of said one or more component processes, said step being carried out after receipt of said request for said service, (Col. 23, lines 11-22, scheduling by scheduling server).

As per claim 66, Carr et al discloses:

identifying component processes for use in provisioning the requested service, (Col. 17, lines 15-24, shows daemon process and slave process identified by connections to PC).

As per claim 67, Carr et al discloses:

Initiating one or more of said component processes identified for use in the requested service, (Col. 17, lines 15-24, forwarding addresses via a "connect" message).



7. Claim 65, 68-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr et al (US 5,608,446).

As per claim 65, Carr et al fails to specifically disclose the following, however, does disclose first and second requests in col. 8, line 29-Col. 9, line 4, and therefore, it would be obvious to repeat the scheduling according to a service request based on conditions established under negotiations as described in independent claim 61, and as disclosed below:

re-schedule the component process; transmit a message to an entity which requested the service, indicating that ii) the service can only be provided under conditions different to said previously established conditions; iii) re-assign the service to another service provider; or indicate to an entity which requested the service that the requested service cannot be provided, (col. 27, lines 58-62, [identify alternatives and implement indicated actions]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to re-schedule the component process; transmit a message to an entity which requested the service, indicating that ii) the service can only be provided under conditions different to said previously established conditions; iii) re-assign the service to another service provider; or indicate to an entity which requested the service that the requested service cannot be provided, with the motivation of repeating a process for which multiple service requests have been received.

As per claims 68, 76, Carr et al discloses:

Executing a first...software process/executing a second...software process, (Col. 17, lines 15-24, shows daemon and slave processes being executed through "connect" command);

the execution of said...software processes establishing conditions applicable to provision of said service by negotiation between said first and second autonomous software processes, (Col. 9, line 67-Col. 10, line 15, providing negotiations in order to allocated bandwidth without causing overload conditions);

accessing an up-datable data store and storing said conditions in said data store once established, (Col. 9, lines 45-49, shows a database that works in conjunction with the negotiation means);

the execution of said first...software process subsequently involving the receipt of a request for said service for handling by said first autonomous software process, (Col. 5, lines 19-25, keyboard/monitor, and input/output interface, w/ col. 20, lines 14-21, shows user input for a request to switch to a high speed link, Col. Col. 9, lines 61-64, service provider uses system to initiate a request);  
and

responsive to receipt of said request, said first...software process testing whether the established conditions for provision of said service are met and providing an indication as to whether the requested service is available in dependence upon the outcome of said test, (Col. 9, lines 60-67, assigning a specified bandwidth to accommodate data to be transmitted from the service provider to the user);

Carr et al fails to disclose, autonomous software processes/ Wherein there are no control dependencies between the first and second autonomous software processes,

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but does disclose more than one process as disclosed above in the first limitation, however, is obvious with Carr et al since Carr et al disclose that their system has more than one process that are automatically inclined in col. 6, lines 64-67, and therefore can be independently automatically initiated.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have autonomous software processes with the motivation of having processes that would initiate without relying on other processes.

As per claim 69, Carr et al discloses:

in which one or more of said established conditions is stored in said data store until advent of an expiry time associated with said one or more conditions, (Col. 9, lines 53-62, after expiration).

As per claim 70, Carr et al discloses:

wherein, responsive to receipt of said request, said first autonomous software process tests whether any conditions for provision of said service are extant and substitutes a substitute condition in the event that no such conditions are found, (Col. 9, lines 53-56, w. col. 10, lines 1-15, update of channel availability to prevent overload conditions).

As per claim 71, Carr et al discloses:

wherein, responsive to receipt of said request, said first autonomous software process tests whether any conditions for provision of said service are extant and substitutes a substitute condition in the event that no such conditions are found, (Col. 9,

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lines 53-56, w. col. 10, lines 1-15, update of channel availability to prevent overload conditions).

As per claims 72, 73, Carr et al discloses:

in which said first autonomous software process identifies one or more further autonomous software processes representing resources required to provide one or more component services in the provision of said service/in which said first autonomous software process identifies one or more further autonomous software processes representing resources required to provide one or more component services in the provision of said service, (Col. 17, lines 15-24, shows daemon and slave processes being executed through "connect" command).

As per claim 74, 75, Carr et al discloses:

a computer having a memory storing...software code, (Col. 13, lines 51-55, shows that system is implemented by means of programs via code, w/Col. 14, lines 44-45, computer having memory);

provide...software process representing a service requester, (col. 9, lines 48-56, [action control sending requests]);

the execution of said...software process

a) establishing conditions applicable to provision of said service by negotiation between said...software process and one or more other...software processes, (Col. 9, line 67-Col. 10, line 15, providing negotiations in order to establish conditions necessary for bandwidth not to go into overload);

b) accessing an up-datable data store and storing said conditions in said data store once established, (Col. 9, lines 45-49, shows a database that works in conjunction with the negotiation means); and

c) on subsequently receiving a request for said service, (Col. 5, lines 19-25, keyboard/monitor, and input/output interface, w/ col. 20, lines 14-21, shows user input for a request to switch to a high speed link, w/Col. Col. 9, lines 61-64, service provider uses system to initiate a request), accessing said data store and testing whether the established conditions for provision of said service are met and providing an indication as to whether the requested service is available in dependence upon the outcome of said test, (Col. 9, lines 45-49, shows a database that works in conjunction with the negotiation means, col. 10, lines 21-26, control processor mediates requests, w/Col. 9, lines 60-67, assigning a specified bandwidth to accommodate data to be transmitted from the service provider to the user).

Carr et al fails to disclose, autonomous software processes/ Wherein there are no control dependencies between the first and second autonomous software processes/said autonomous software code is executable to provide a plurality of software threads, able to concurrently interact with different other autonomous software processes, but does disclose more than one process as disclosed above in the first limitation, however, is obvious with Carr et al since Carr et al disclose that their system has more than one process that are automatically inclined in col. 6, lines 64-67, and therefore can be independently automatically initiated.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have autonomous software processes with the motivation of having processes that would initiate without relying on other processes.

***Response to Arguments***

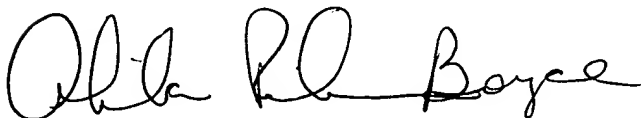
8. Applicant's arguments with respect to claims 53-58 and 61-76, have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

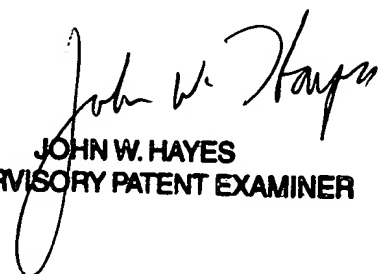
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



A. R. B.  
May 15, 2006



JOHN W. HAYES  
SUPERVISORY PATENT EXAMINER